AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1 - 34.   (Cancelled)

35. (Currently amended) A method for translating messages in a multi-protocol environment, the method comprising:

> receiving, by a gateway onboard a machine, a message from a module off-board the machine in a first data link protocol used by the off-board module, the message including:

>> a first parameter value in a format consistent with the first protocol; and

>> a parameter identifier corresponding to the first parameter value;

> extracting the parameter identifier and storing the first parameter value, by the gateway;

> scaling the first parameter value to a second parameter value consistent with a second data link protocol using a scale factor associated with the second data link protocol, the second data link protocol used by a destination module onboard the machine; and

> transmitting a message containing the second parameter value via the second data link protocol to a the onboard destination module.

36. (Currently amended) A method for translating messages in a multi-protocol environment, the method comprising:

> receiving, by a gateway onboard a machine, a message from a module onboard the machine in a first data link protocol used by a the

onboard module ~~machine~~, the message including a parameter
identifier;

matching, by the gateway, the parameter identifier with a corresponding
parameter identifier included in a translation table associated with
the gateway,

scaling a parameter value contained in the message to a second
parameter value consistent with a second data link protocol using a
scale factor associated with the matched parameter identifier, the
second data link protocol being used by a module off-board the
machine, and

sending a message including the second parameter value to ~~a~~ the off-
board module using the second data link protocol.

37. (Original) The method of claim 36, wherein the first data link protocol is a
proprietary data link protocol.

38. (Original) The method of claim 36, wherein the second data link protocol is a
non-proprietary protocol including one of a J1939 protocol, a CAN protocol, a MODBUS
protocol, a serial standard data link protocol, and an Ethernet protocol.

39. (Currently amended) A system for exchanging information in a multi-
protocol environment, the system comprising:

a translation table implemented in a memory device, the translation table
including:

at least one parameter identifier,

a plurality of scale factors associated with the at least one
parameter identifier, wherein each of the plurality of
scale factors corresponds to a different data link
protocol, and

a universal storage section for storing a parameter value

associated with the at least one parameter identifier;

and

a gateway residing ~~in~~ onboard a machine configured to access the

translation table, wherein the gateway ~~device~~:

receives a message from a module onboard the machine[[,]]

including a first parameter identifier and a first

parameter value, ~~from~~ via a first data link used by the

onboard module ~~machine~~,

determines whether the first parameter identifier matches the

at least one parameter identifier in the translation

table,

when a match is found by the gateway, scales the first

parameter value to a second parameter value

consistent with a second data link protocol using the

scaled factor corresponding to the matched

parameter identifier, the second data link protocol

being used by a module off-board the machine, and

outputs a message in the second data link protocol

containing the second parameter value to the off-

board module via a second data link used by the off-

board module ~~using the second data link protocol~~.

40. (Original) The system of claim 39, wherein the first data link protocol is a proprietary data link protocol.

41. (Original) The system of claim 39, wherein the first data link protocol is a non-proprietary protocol including one of a J1939 protocol, a CAN protocol, a MODBUS protocol, a serial standard data link protocol, and an Ethernet protocol.

-4-

42. (Original) The system of claim 39, wherein the second data link protocol is a non-proprietary protocol including one of a J1939 protocol, a CAN protocol, a MODBUS protocol, a serial standard data link protocol, and an Ethernet protocol.

43. (Cancelled)

44. (Currently amended) A system for exchanging information in a multi-protocol environment including a network of modules, the system comprising:

> a source module onboard a first machine for sending a source message including content consistent with a first protocol used by the source module, the source module being coupled to a source data link that uses the first protocol;

> a destination module onboard a second machine for receiving the source message, the destination module located at a distance from the source module that exceeds a transmission range of the first protocol;

> a first gateway onboard the first machine and coupled to the source data link and to an intermediate data link communicatively connecting the first machine and the second machine, the intermediate data link using a second protocol, the first gateway being configured to:

>> receive the message from the source data link in the first protocol,

>> encapsulate the message within a transmission unit consistent with the second protocol, and

>> output the encapsulated message to the intermediate data link using the second protocol; and

a second gateway <u>onboard the second machine and</u> coupled to the
intermediate data link and <u>to</u> the destination module, the second
gateway <u>being</u> configured to:

receive the encapsulated message from the intermediate
data link;

extract the source message from the second protocol
transmission unit;

translate content of the source message to a format
consistent with a destination protocol different than
the first protocol and used by a destination data link
coupled to the destination module<u>, the translating
including scaling a first parameter value contained in
the source message to a second parameter value
consistent with the destination protocol</u>; and

route the translated message to the destination module over
the destination data link.

45. (Cancelled)

46. (Currently amended) A computer-readable medium storing a computer-
readable program <u>which, when executed by a gateway onboard a machine, causes the
gateway to perform a multi-protocol communication method</u> <s>for communication in multi-
protocol environment</s>, the <u>method</u> <s>computer program executed by a gateway and</s>
comprising:

receiving, by <s>a</s> <u>the</u> gateway, a message in a first data link protocol used by
a <u>module onboard the</u> machine, the message including a parameter
identifier;

matching, by the gateway, the parameter identifier with a corresponding

parameter identifier included in a translation table associated with

the gateway[[,]];

scaling a parameter value contained in the message to a second

parameter value consistent with a second data link protocol using a

scale factor associated with the matched parameter identifier, the

second data link protocol being used by a module off-board the

machine; and

sending a message including the second parameter value to a the off-

board module using via the second data link protocol.

47. (New) A system for exchanging information in a multi-protocol environment,
the system comprising:

a translation table implemented in a memory device, the translation table

including:

at least one parameter identifier,

a plurality of scale factors associated with the at least one

parameter identifier, wherein each of the plurality of

scale factors corresponds to a different data link

protocol, and

a universal storage section for storing a parameter value

associated with the at least one parameter identifier;

and

a gateway residing onboard a machine and configured to access the

translation table, wherein the gateway:

receives a message from a module off-board the machine

including a first parameter identifier and a first

parameter value, via a first data link used by the off-board module,

determines whether the first parameter identifier matches the at least one parameter identifier in the translation table,

when a match is found by the gateway, scales the first parameter value to a second parameter value consistent with a second data link protocol using a scale factor corresponding to the matched parameter identifier, the second data link protocol being used by a module onboard the machine, and

outputs a message in the second data link protocol containing the second parameter value to the onboard module via a second data link used by the onboard module.